

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A method for identifying an analyte which is a histone deacetylase (HDAC) inhibitor, which comprises:

- (a) providing cells which include a reporter gene encoding an enzyme operably linked to a transcription regulatory sequence which includes nucleotide sequences responsive to an HDAC inhibitor selected from the group consisting of Apicidin, Trichostatin A, sodium butyrate, SAHA, and MS27-275 stably integrated into the genome of the cells;
- (b) culturing the cells in a medium which includes the analyte and a substrate for the enzyme; and
- (c) measuring activity of the enzyme on the substrate wherein an increase in the activity of the enzyme on the substrate indicates that the analyte is an HDAC inhibitor.

Claim 2 (Original): The method of Claim 1 wherein the cells are mammalian cells.

Claim 3 (Original): The method of Claim 1 wherein the cells are human cells.

Claim 4 (Original): The method of Claim 1 wherein the cells are selected from the group consisting of HeLa cells and MCF7 cells.

Claim 5 (Original): The method of Claim 1 wherein the cells are ICLC PD02008.

Claim 6 (Original): The method of Claim 1 wherein the transcription regulatory sequence includes a transcription regulatory sequence of p21^{WAF1/CIP1} which does not include nucleotide sequences responsive to p53.

Claim 7 (Original): The method of Claim 6 wherein the p21^{WAF1/CIP1} transcription regulatory sequence includes from about nucleotide -183 to nucleotide +25 of the p21^{WAF1/CIP1} transcription regulatory sequence.

Claim 8 (Original): The method of Claim 6 wherein the p21 WAF1/CIP1 transcription regulatory sequence includes the nucleotide sequence set forth in SEQ ID NO:1.

Claim 9 (Cancelled)

Claim 10 (Original): The method of Claim 1 wherein the reporter gene encodes β -lactamase.

Claim 11 (Original): The method of Claim 10 wherein the substrate for the β -lactamase includes a cephalosporin cleavage site.

Claim 12 (Currently amended): The method of Claim 1 wherein the substrate is labeled with a donor:acceptor fluorophore pair which is capable of fluorescence resonance energy transfer.

Claim 13 (Currently Amended): A cell comprising a reporter gene encoding an enzyme operably linked to a transcription regulatory sequence which includes nucleotide sequences responsive to an HDAC inhibitor selected from the group consisting of Apicidin, Trichostatin A, sodium butyrate, SAHA, and MS27-275 stably integrated into the genome of the cell.

Claim 14 (Currently Amended): The cell of Claim 13 wherein the reporter gene is operably linked to a p21 WAF1/CIP1 transcription regulatory sequence which includes nucleotide sequences responsive to the histone deacetylase (HDAC) inhibitor and does not nucleotide sequences responsive to p53.

Claim 15 (Currently Amended): The cell of Claim 13 wherein the cell does not have a functional p53.

Claim 16 (Currently Amended): The cell of Claim 13 wherein the cell is selected from the group consisting of HeLa cells and MCF7 cells.

Claim 17 (Original): The cell of Claim 14 wherein the cell is ICLC PD02008.

Claim 18 (Original): The cell of Claim 14 wherein the p21 WAF1/CIP1 transcription regulatory sequence includes the nucleotide sequence from about nucleotide -183 to nucleotide +25 of the p21 WAF1/CIP1 transcription regulatory sequence.

Claim 19 (Original): The cell of Claim 14 wherein the p21^{WAF1/CIP1} transcription regulatory sequence includes the nucleotide sequence set forth in SEQ ID NO: 1.

Claim 20 (Currently Amended): The cell of Claim 13 wherein the reporter gene encodes β -lactamase.

Claim 21 (Currently Amended): A plasmid comprising a gene encoding β -lactamase operably linked to a transcription regulatory sequence which includes nucleotide sequences responsive to a histone deacetylase (HDAC) inhibitor selected from the group consisting of Apicidin, Trichostatin A, sodium butyrate, SAHA, and MS27-275.

Claim 22 (Currently Amended): The plasmid of Claim 21 wherein the gene encoding the β -lactamase is operably linked to a p21^{WAF1/CIP1} transcription regulatory sequence which includes nucleotide sequences responsive to the histone deacetylase (HDAC) inhibitor and does not nucleotide sequences responsive to p53.

Claims 23-32 (Cancelled)